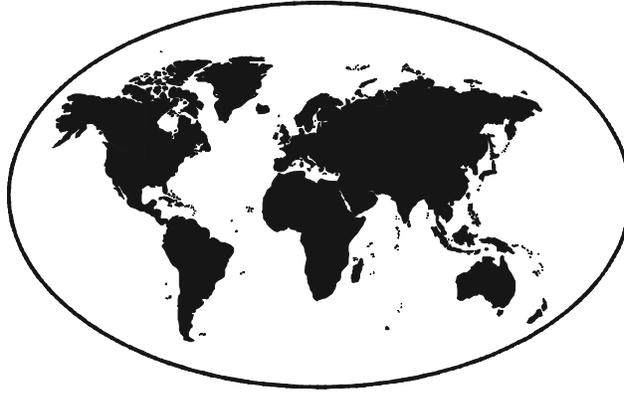


# Eurasia Bulletin

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### **Introduction**

This is the ninth in a series of reports by the Eurasia Branch. This bulletin highlights some of our current work in the areas of demography and economics. The focus is on examining and interpreting new and existing data sets produced by statistical organizations of Eastern Europe, the former Soviet states and Asia. The first article of this issue features an examination of factors relating to the decline in living standards in Ukraine in the post-Soviet period. The piece describes the development of formerly illegal sectors of the economy, which have rendered official data incomplete in their depiction of actual living

conditions. The second article describes efforts to reform China's pension system to take account of changes in the population's age structure as well as the increasingly diversified nature of economic activity. The final article describes a survey that was intended to identify the determinants that affect export patterns among selected Chinese enterprises.

## **Standard of Living in Ukraine**

**Stephen Rapawy**

[All data from The World Bank, *Poverty in Ukraine; Report No. 15602-UA*. June 27, 1996, unless otherwise stated.]

### ***Introduction***

The economic crisis in the former Soviet Union depressed living standards, but the extent is unclear. Data presented in value terms are to be treated with caution because price deflators do not adequately account for the extreme inflation that has occurred, as consumer prices rose 38,000 times over between 1990 and 1995. At the same time, the reported decrease in production seems incorrect. Gross domestic product (GDP) reportedly fell 52 percent during the 5-year period. A sizeable share of the decrease probably is due to reduced production for the military, but even a less dramatic drop could not sustain the population, which lived at near subsistence levels during the Soviet period. However, faulty adjustments for inflation and other shortcomings in the statistical system cannot account for changes of this magnitude. The principal explanation seems to be the shift from the official to unofficial economy. This "second" economy was a feature of the Soviet economy for decades and by all accounts increased substantially after the breakup of the Soviet Union. Some activities purposely are concealed, while others simply are difficult to enumerate and measure. Besides permanent employment, many people are engaged in such diverse activities as using privately owned cars as taxis, selling edibles and consumer goods, providing a wide range of services, and working a variety of odd jobs. These activities are difficult to capture in official statistics, even when no attempt is made to conceal them.

### ***Measuring Standard of Living***

The standard of living is difficult to gauge from official income, consumption, and expenditure data because a large share of economic transactions

are not recorded. Surveys, especially of household budgets, are the principal sources of information. Survey data always contain some error, but external factors introduce considerable additional distortion. Most adults derive income from several sources: their primary jobs, a second job or a combination of odd jobs, cultivation of land, or peddling. None of these secondary activities result in the issuance of statements of earnings at the end of the year. Payments are made in cash, whether the transaction is with an individual or in a store. There are no canceled checks or credit card statements to indicate how much was spent. Individuals would have to keep detailed records of income and expenditures to accurately answer survey questions, and there is no indication that households keep such records. At the same time, a sizeable share of income is derived from quasi-legal or illegal activities, earnings from which individuals presumably wish to at least partially conceal. These deceptions and lack of records produce a situation in which expenditures are considerably larger than income. The discussion which follows below is based largely on the annual household surveys conducted by the Ministry of Statistics of Ukraine and a 1995 World Bank survey of 2,024 Ukrainian households.

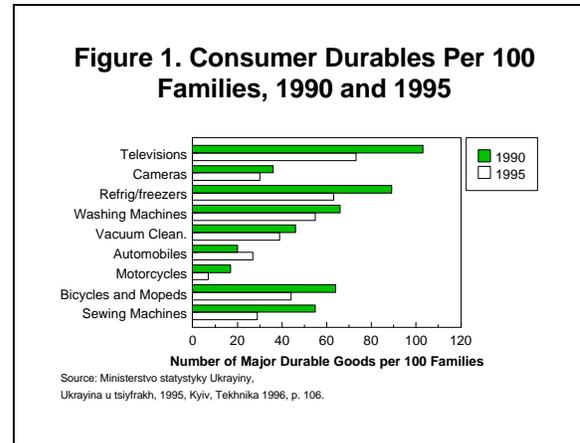
The Ministry of Statistics has been surveying almost 15,000 households annually for many years. Households are asked to keep a log of their income and expenditures, for which they are compensated. While the exercise should yield reasonably accurate data, experience indicates that the sample may not be representative of the general population. On the other hand, the World Bank survey, conducted in the summer of 1995, questioned what was deemed to be a representative sample of 2,024 households throughout Ukraine and their adult population, 15 years of age and older. Comparison of the surveys revealed substantial discrepancies for some components of income and expenditure. Nevertheless, there is considerable agreement on many overall trends. In both surveys, expenditures exceed income. The World Bank data indicate that expenditures are approximately twice as large as income. In the case

of Ministry of Statistics surveys, income equals expenditures but there are internal inconsistencies indicating that the figures were forced. Presumably, the Ministry chose not to publish figures implying a sizeable share of the income derived from illegal activities. It should not be assumed, however, that the difference between income and expenditures represents only illegal income because there are other contributing factors.

The Ukrainian family budget surveys show that wages' share of total family income declined from 67.5 to 41.2 percent between 1990 and 1994. The decrease was off set, in part, by income from private plot farming, which rose from 10.2 to 30.5 percent, and income from other sources, which increased from 8.9 to 18.4 percent. Among expenditures, both sets of data agree that a disproportionate share of family income is spent on food. The Ukrainian data show food expenditures (including alcohol) rising from 35.5 to 66.0 percent during the 5-year period (Ministerstvo statystyky Ukrainy, *Statystychny shchorichnyk Ukrainy za 1994 rik*. Kyiv, Tekhnika, 1995, p. 349). The World Bank, based on the 1995 survey, reports food expenditures in excess of 80 percent of family income. Under either scenario, little is left for consumer goods and personal needs.

Lower consumption of meat and dairy products further underscores growing impoverishment of the population. Despite larger outlays for food, people are eating more starchy food. Ministry data show that consumption of meat, dairy products, and eggs declined by about a third (Ministerstvo statystyky Ukrainy, *Byudzhetny simy v hrupovannyakh za rozmirom serednodushovoho sukupnoko dokhodu iryady inshykh sotsialno-ekonomichnykh oznak*. Kyiv, 1995, p. 9). People now consume more bread, potatoes, cabbage, and less animal fats. The new diet is less tasty but more healthy. Lower ownership of consumer durables is another indicator of growing impoverishment. Ownership of basic appliances fell between one-fifth and one-third in the last few years (Figure 1) and outlays for footwear and clothing

decreased by about 60 percent. If the present economic crisis persists, a growing share of the population could become destitute in the near future.



There is general agreement that the standard of living has been falling, but not regarding the number of people living in poverty. It is difficult to obtain accurate, representative figures and define poverty. Different analysts get widely varying results depending upon how the minimum subsistence level is defined and whether or not to indicate cultural factors in the definition. Given this caveat, the World Bank survey accepted the minimum consumption basket developed by the Ukrainian Government which includes edibles and other goods and services. The items were priced as of June 25, 1995 to determine the poverty line in value terms. The monthly cost of the basket was estimated to be 3.675 million karbonvantsi (the Ukrainian monetary unit at the time) implying that 29.5 percent of all households lived in poverty because they consumed less than this amount.

Analysis of the consumption of 1,980 households for which data were obtained shows considerable variation. Although nearly 30 percent of households live in poverty, the average consumption level for all households is 7.087 million karbonvantsi, nearly double the poverty level. At the low end, 1.5 percent of households spent less than a million karbonvantsi and an

additional 6.7 percent of households spent between one and two million karboivantsi. The average per capita consumption for these households at the first decile is 1.5 million karboivantsi. Clearly these people live in abject poverty and the second decile is only marginally better off. Almost all households in the third decile are just below the poverty line and those in the fourth slightly above. Thus, 20 percent of the population is destitute and another 20 percent are leading a precarious existence.

The incremental progression of consumption from decile to decile is gradual until the tenth decile is reached. Here, consumption rises 112 percent over that in the ninth decile and is almost 15 times greater than in the first decile. The top 5 percent of all households consume, on average, 31 million karboivantsi, 35.8 percent above the decile average.

Economic differentiation has increased since the Soviet period. However, comparisons with the Soviet era are precarious because top officials received food and other amenities for little or no cost that were not available to the general population. The current economic stratification is more politically dangerous because it is more open, and there is a general perception, largely correct, that the new "businessmen" obtained their wealth by siphoning off government property. But any forecast of social upheaval must be tempered by the fact that people in this part of the world are unusually tolerant of such inequalities.

Poverty status is affected by sex, family size, age, education, and location of residence. Poverty is somewhat more prevalent among females than males (32 percent versus 29 percent). Of all households headed by a single woman, 41 percent are in poverty, while only 5 percent of all households are in this category. Only 27 percent of households without children are in poverty, but the rate rises to 34 percent with two children under 15 years of age, and 48 percent with three or more children. Similarly, 23 percent of households without individuals 65 years or older are in poverty, compared to 49 percent with two or more elderly

persons. As expected, the less educated are more likely to be poor. Those with primary education or less had the highest poverty rate, 37 percent. The rate keeps decreasing as the educational attainment rises; individuals with higher education have the lowest rate, 20 percent. Poverty is more widespread in urban areas than in rural areas, 33 and 27 percent, respectfully. Poverty is more frequent in the east (Donetsk, Luhansk, and Kharkiv oblasts), 35 percent, compared to 26-29 percent in the other sections of the country.

## ***Output and Consumption***

### ***Agriculture***

[All data in this section are from Ministerstvo statystyky Ukrainy, *Statystychnyy shchorichnyk Ukrainy za 1994 rik*. Kyiv, Tekhnika, 1995, pp. 162, 209-19, and 322-35; and Ministerstvo statystyky Ukrainy, *Ukrayina y tsyfrakh, 1995*. Kyiv, Tekhnika, p. 72.]

Reports of fuel and equipment shortages notwithstanding, inputs to agriculture such as electric power, tractors, combines, and trucks decreased little since independence. Application of fertilizer and pesticide is less certain because data are unpublished, and production of both these chemicals dropped drastically in recent years. At the same time, prior to independence, Ukraine had been exporting large quantities of fertilizer, although this leakage from domestic use had decreased sharply in recent years. Presumably, domestic needs continue to be met.

Cultivation of land, output of major crops, and livestock holdings are more internally consistent and more comparable to the reported data of the Soviet period than production of industry. Cultivation of land fell from 32.4 million hectares to 31 million hectare, a 4.3 percent drop between 1990 and 1994. The reduction is confined almost exclusively to wheat, a drop from 7.6 to 4.6 million hectares during the period. The decline has been mitigated somewhat by increased sowing of barley, which went from 2.7 to 5.2 million hectares.

Presumably, barley assumed a larger role as an animal feed. The decrease in the amount of cultivated land is accompanied also by a small rise in the share of crops left unharvested. The increase is confined mostly to grain, and rose from 0.4 percent in 1990 to 2.0 percent in 1994.

Agricultural production has declined since independence. Crop production peaked in the late Soviet period, with record grain crops (of over 51 million tons) in 1989 and 1990. Since then, grain production has fluctuated, but in a downward trend, with wheat registering a precipitous drop. Output of potatoes and vegetables, on the other hand, has been steady. The decline in animal husbandry has been sharper than the reduction of crops. The reduction in the number of cows totaled 10.1 percent, while remaining cattle declined 32.3 percent. The reduction of livestock parallels the one-quarter drop in animal feed. The share in the public sector is declining while private sector is growing. Between 1990 and 1995, stocks of cows on publicly-owned farms fell 26.0 percent while privately held cows rose 34.2 percent.

The reduction of livestock and poultry is accompanied by reduced production of meat, milk, and eggs. The decrease seems to be largely related to the reduced quality of feed. Imports of high value feed from the West virtually ceased after the collapse of the Soviet Union, and the quality of domestically produced feed decreased as well. Production of sugar beets and sugar beet pulp, a by-product of the production of sugar and a nutritious feed, declined. On the other hand, use of roughage (grasses), a poorer substitute, increased.

Lower animal productivity probably is exaggerated as some output is sold privately and is not reflected in official statistics. The private sector played an important role during the Soviet period and has expanded since independence. The share of cows held privately increased from 26.1 to 38.9 percent between 1990 and 1995 and the increase for pigs was even greater, rising from 27.5 to 45.5 percent. The increases were both relative and

absolute. Much of the animal products from this sector are consumed at home, and the remainder is sold to individuals or on a private market. Official statistics include products consumed domestically or sold privately but presumably a large portion goes unrecorded.

While there has been a decrease in basic agricultural products, it is much smaller than the 53 percent decline of processed food production during the 1990-95 period. Wheat production, for example, dropped 23 percent compared to a 33.4 percent decrease of flour and 42.5 percent decrease of bread. And while the wheat harvest fluctuates annually, production of flour and bread has been declining continuously. The disparity between the output of basic animal products and the corresponding processed foods is even greater than for crops. Meat in slaughter weight decreased 46.8 percent, while basic meat products plummeted 70.9 percent. Milk and dairy production show a similar trend. Milk output fell 29.8 percent, production of butter decreased 50.8 percent, and that of cheese, 60.8 percent. Analysis of the published data indicates the following pattern, some decrease in output of basic agricultural products, followed by a much steeper decline in processed foods, and the reported sales figures are absurdly low. Sales of meat to the population in 1995 amounted to 25 percent of the 1990 figure, while milk and milk products were down to 17 percent. Production of potatoes fell 18 percent, although the reported output remained at about the same level during the 5- year period.

Several factors contribute to this disparity, but they are difficult to quantify. By all accounts, the second economy is booming, especially in trade. The distributors have to get processed food from enterprises still owned mostly by the state, and these illegal or quasi-legal sales are not reported. In addition to the illegal sales, there is considerable anecdotal evidence that employees occasionally are paid in kind and production used as wage payments presumably are not recorded as sales. Finally, elimination of price controls resulted in extremely

high food prices. As a result, private gardening, which had been thriving during the Soviet period, expanded as employees were given additional plots of land to grow food. This effort is confined to raising vegetables and livestock--milk cows, pigs, and poultry. The output is consumed by the family, and whatever surplus remains is sold privately. This type of production and distribution is hard to capture completely, despite government efforts. Thus, the sales figures obviously do not reflect actual consumption but establishing the true level of consumption is difficult, much less detecting changes over time in consumption. Limited consumption data based on surveys do not always seem reliable, are highly aggregated, and reported in value terms. Because of difficulty in adjusting for huge increases in consumer prices, another distortion of unknown magnitude is introduced.

### **Industry**

The official index of industrial output decreased 47 percent between 1990 and 1995 with considerable variation by branch. Production of electric power had the lowest decline, while the other branches typically decreased by 50-60 percent (Ministerstvo statystyky Ukrainy, *Ukrayina u tsiyfrakh*, 1995. Kyiv, 1996, p. 50). The drop in branches related to weapons production--coal, ferrous metallurgy, and machine building--is quite understandable, but the decrease in production of consumer goods and food industry are more difficult to explain. The decline of major foods has been steep, but the decrease in light industry is even greater, 69 percent.

Tracing the reduction of consumer goods through the various stages of production is more difficult than in the case of foods, where basic inputs are grown domestically. Soviet manufacturing was extremely integrated, and production of even simple household items required parts from plants scattered throughout the Soviet Union. Post-Soviet disruption of old links established by central planning and shortage of money to pay for imports has contributed to the

decreased output of consumer goods. This can be seen most clearly in textiles. Manufacture of textiles declined precipitously, led by reduction in cotton and silk fabrics, whose fibers are imported. Production of consumer goods decreased, but probably less than overall output because there was a more drastic reduction in military and heavy industries. Sales of consumer goods to the population decreased even more than production, a pattern similar to that in processed foods. Typically, then, there was a decrease in production of raw materials, followed by a sharp decline of goods produced, and then a steeper decline in sales.

While production and distribution of consumer goods are understated, there can be little doubt that the population is sinking deeper into poverty. Since the breakup of the Soviet Union, fewer families own basic household appliances. Comparable figures for clothing and footwear have not been published, but the situation presumably is similar in view of the sharp reduction of output. Reduced ownership of consumer goods, however, is due largely to the drop in income and a steep rise in food prices, forcing the population to divert an overwhelming share of income for food.

### **Services**

The service sector was the most neglected segment of the Soviet economy. In recent years, services deteriorated still further, but the extent was unclear due to the role of the newly established private sector, with incomplete coverage in official data. There are, however, some statistics for two crucial services; housing and medical care.

Available housing does not appear to have deteriorated despite a 76.8 percent decrease in investment for housing and public buildings in the 1990-1995 period (Ministerstvo statystyky Ukrainy, *Ukrayina u tsiyfrakh*, 1995. Kyiv, 1996, pp. 84, 85). The decrease did cause a sharp reduction in the number of new buildings commissioned. But even a smaller addition to the housing stock, coupled with a slight decrease of the

population, caused per capita living space to increase from 17.8 to 19.0 square meters. The quality of housing probably deteriorated because less money was available, but more apartments are now owned privately and the new owners can be expected to do some repairs of their own.

Measured by the number of doctors, hospitals, and hospital beds, health care seems adequate and may not have deteriorated. The number of physicians per 100,000 population, for example, is comparable to that of the United States. The problem with health care in the former Soviet Union and now in Ukraine was and is quality rather than quantity. Antiquated equipment, low quality pharmaceuticals, and a rigid bureaucratic system produced health care that was inferior to that of the developed West. (Data on health care are from Ministerstvo statystyky Ukrayiny, *Ukrayina u tsyfrakh*, 1995. Kyiv, 1996, pp. 67, 130.) While the quality care is difficult to quantify directly, it can be assessed indirectly by examining health trends of the population over time. Life expectancy at birth, a good overall indicator, shows a decrease from 71 to 67 years between 1985 and 1995. Men account for much of the drop; their longevity decreased from 66 to 62 years, while for women the drop was smaller, from 75 to 73 years. Infant mortality rose from 12.8 to 14.4 per 1,000 births. By contrast, U.S. life expectancy was 73 years for males and 79 for females, and infant mortality was estimated at 6.7 per 1,000 live births for 1996 (World Factbook 1996). Cardiovascular diseases, blamed for 56.8 percent of all deaths in 1995, increased by more than a third between 1990 and 1995. Malignancies increased slightly and alcohol induced deaths doubled--the latter is probably more a reflection of stress caused by economic crisis than poor health care. Some increases may be attributed to the aging population but, of course, aging is not growing at the same rate as illness.

While there is considerable annual variation, production of medicine is generally declining. Of the 24 medicines for which data are reported for 1995, 16 decreased since 1990 and eight increased.

However, the largest decreases occurred in medications designed to treat illnesses that account for the largest share of deaths. The most obvious example are medicines to treat cardiovascular diseases. In fact, there is an association between increased deaths and the reduced output of medications for these diseases. Some production deficits might be mitigated by imports; however, there is no indication of large imports.

### ***The Second Economy***

The second, or shadow, economy received considerable attention from Western economists but was not officially acknowledged in the former Soviet Union. The second economy had been expanding continuously since the death of Stalin and blossomed in the 1980s, with the pace rapidly accelerating in the post-Soviet period. Shortages of quality goods in state stores, coupled with the growth of wages, created a situation where many people could afford, and were willing to pay, higher prices to get desired goods immediately. At the same time, some individuals were willing to take the risk in satisfying this demand because remunerations were great and the state's repressive apparatus had weakened. The lucrative market induced some enterprises to create special shops producing for the private market or to divert state deliveries to persons who established informal distribution networks. Unsatisfied demands in the service sector provided still another opportunity for individuals--cars, furniture, apartments, and so on are now repaired largely by individuals. Russian officials, in an unpublished memorandum, estimated that in 1991, the year of the breakup, the shadow economy accounted for 15 percent of all economic activity in Russia and 20 percent in Ukraine. A Ukrainian economist estimated that the second economy in Ukraine comprised 30 percent of GDP in 1994.

The second economy comes in many shades--legal, illegal, and much of it a combination of both. For example, it is legal to repair someone's apartment for money, but needed fixtures or

supplies frequently cannot be purchased in state stores. The individual then is forced to make purchases on the black market, where the items either were taken from state enterprises or produced by shops operating illegally.

This economy encompasses a wide range of activities, including private farming. Cultivation of private plots remains the second largest source of income for most people after wages from their primary job. Private farming expanded considerably during the last several years. In 1994, 92 percent of potatoes, 65 percent of vegetables, 43 percent of meat, 40 percent of milk, and 54 percent of eggs were produced on private plots. The output was produced on 19.1 million plots averaging one-third hectare (about eight-tenths of an acre), amounting to about 20 percent of all the land cultivated in the country. The small plots of land, however, cannot support the livestock necessary to produce a comparable level of animal products.

Historically, state and collective farm families were given pasturing rights and some animal feed, a form of payment in kind. Farmers also were permitted to buy feed, but considerable quantities apparently were taken from farms without compensation. Since independence, livestock-raising by the urban population increased the number who must rely exclusively on purchased feed. The new market undoubtedly stimulated trade in illegal feed.

The second economy made considerable inroads in other branches of the economy as well. Based on a survey of 200 privately-owned enterprises in January 1993, approximately 55 percent of their income was derived from transactions with the second economy. Income from this source for state-owned enterprises increased from 10 to 50 percent between 1992 and 1994. The machine building industry reportedly sells 5 to 10 percent of output to the second economy, the sales presumably consist largely of consumer durables. Oil crises notwithstanding, 10 percent of oil products are sold to private

purchasers. Selling to the second economy apparently is attractive because payments are made immediately and in cash. Unregistered conveyance of passengers account for 15 to 20 percent of the people transported, and for individual car owners, giving rides to people for money is one of the more important sources of income. Medical services nominally are free, but as during the Soviet period, paying physicians on the side to get quality care is widespread and some doctors now have private practices. Individual payments reportedly defray 30 to 40 percent of total health care expenditures. It has been estimated that this economy encompasses 50 to 70 percent of the service sector.

The second economy is more prominent in domestic trade and services than in other branches of the economy. Based on the family budget survey of 1995, 57.5 percent of consumer goods, excluding food stuffs, were sold outside the registered trade network. The share in services is even greater: 67.9 percent of apartment renovations, 70.1 percent of construction, 41.9 percent of furniture and appliance repairs, 59.1 percent of car repairs, and 48.6 percent of passengers transported by motor vehicles occurred outside the registered trade network.

The second economy plays an impressive role in foreign trade as well. Export and import data with approximately 40 non-NIS countries show that a considerable share of trade is not captured by official Ukrainian data.

### ***Conclusion***

There is general agreement that the socio-economic situation in Ukraine has deteriorated in the post-Soviet era. Nutritional requirements are being met with less expensive foods, while ownership of consumer durables has slipped. While some of the decline in official data is offset by the expanding role of formerly illegal, non-official sectors of the economy, declining life expectancies and rising infant mortality underscore that people are living less well in the early, post-Soviet era.

## **Pension Reform in China: Preparing for the Future**

Lorraine A. West

### ***Introduction***

Old age security is one of the first components of the social security system in China to be selected for reform. Originally, China's social security system was designed to deliver many of the social services and benefits to the population through state-owned enterprises. With the structural transformation of China's economy, continued enterprise-based provision of social services became an obstacle to labor mobility and state-owned enterprise competitiveness (Naughton, 1995; Liu, 1995). Both enterprises and laborers now must adapt to competing in a market-oriented economy, and their ability to do so will depend in part on reform of China's social security system. The government has made clear the need to shift responsibility for providing social services and benefits from enterprises to a combination of the government, enterprises, community, and individuals.

The weaknesses and limitations of the old pension system, first established in 1951, became apparent as China shifted towards a market-oriented economy in the early 1980s. The enterprise-based system was increasingly unable to meet present obligations, and pay-as-you-go financing clearly would be unsuitable to meet the challenge of the next century with an aging population. Furthermore, the pension system, which was limited primarily to employees of government and party organizations, state-owned enterprises, and large urban collectives, was shrinking in its coverage of the labor force. The changing structure of China's economy and population led researchers and officials to examine the existing system and propose major changes. Various reforms of the pension system were conducted on a trial basis in several cities starting in the mid-1980s. Pension reform gained momentum in the early 1990s when experiments

became more widespread and social security reform became a high priority of senior government officials.

### ***Motivations for Reform***

Both demographic and economic changes prompted a major revamping of China's old age security system. Changes in employment structure, fewer workers to pensioners, declining income replacement levels, precarious funding, and diminishing coverage of the labor force under the former system are among the major factors compelling reform of the old age pension program.

### ***Declining Workers-to-Retirees Ratio***

When first established in the 1950s, the pension system for state employees offered life-time pensions upon retirement at age 50 to women and at age 60 to men with a record of at least 20 years employment. Therefore, few state retirees qualified for pensions until the 1970s. Urban collective enterprises which offered old age insurance also had few qualified retirees until the 1970s. In 1978, state pensioners numbered only slightly more than 2.8 million, accounting for 90 percent of all pensioners. In that same year, the eligibility requirement was reduced to 10 years of employment, partly to encourage retirement and free up jobs for young unemployed adults (Davis, 1993). State pensioners doubled over the next 2 years and doubled again by 1986. Pensioners from urban collective enterprises, while fewer in number, rose more rapidly than state pensioners in the 1980s. The liberalization of eligibility criteria contributed to a rapid increase in pensioners and led to a sharp decline in the workers-to-retirees ratio from 30 state and urban collective workers for every pensioner in 1978 to only 13 in 1980. The ratio of workers to pensioners has continued to decline, reaching 7.1 in 1986 and only 5.1 in 1994.

At the same time as more employees met the eligibility criteria, the population began to age. The urban population aged 60 and above reached 8

percent of the total urban population in 1990, up from 7 percent in 1982 (Population Census Office, 1985; 1993). The urban population aged 60 and over is projected to grow annually by 5.7 percent during the 1990s, while those in the urban labor force age group of 20-59 will increase annually by 3.5 percent (Harbaugh and Banister, 1994). From 2000 to 2010, the elderly growth rate will continue to outpace growth in the potential labor force (those of working ages) (4.3 percent versus 2.5 percent). The urban population aged 60 and above will reach over 10 percent of the urban total in 2000 and nearly 13 percent in 2010. The present bulges in the population structure at the young working-age level will have shifted close to or into the retirement age groups by 2025.

### ***Rising Enterprise Burden***

Since 1969, pensions and other worker benefits have been funded solely out of each enterprise's current operating fund. Consequently, as the pension system matured, the financial burden on enterprises with more retirees grew disproportionately to those with relatively young work forces. Enterprises with older work forces began to find themselves at a disadvantage in competing with younger enterprises. In most cases, the increasing financial burden was illusory because state enterprises often could pass along to higher-level parent units (for example, the government) any pension fund obligations that could not be met out of enterprise retained funds. With the introduction of enterprise reforms in the mid-1980s, including the introduction of independent financial accounting for firms, this became less of an option. Some firms in financial difficulties were forced to reduce, delay, or completely cancel pension benefits to retirees. For example, in Hainan province, nearly 30 percent of state enterprises were unable to meet fully pension obligations (Zhou, 1994). While it should be noted that enterprise reforms are incomplete and the number of enterprises allowed to declare bankruptcy is controlled, pressure is mounting on enterprises to cope without government subsidies.

### ***Erosion of Pension Benefits***

The emergence of inflation in the reform period, averaging nearly 8 percent annually in the 1980s, led to a rapid erosion of pension benefits which were not indexed. Prior to the launching of economic reforms, inflation was minimal, averaging slightly over 1 percent annually during the period 1950 to 1978. At the time of retirement, pensions appeared quite generous; for example, in 1980, the average annual pension of a state retiree was 781 yuan and replaced 97 percent of the average state wage (China State Statistical Bureau, 1985: 554; 1991, p. 733). For urban collective retirees, the average annual pension was 465 yuan in 1980, a wage replacement ratio of 75 percent (China State Statistical Bureau, 1985, p. 554; 1992, p. 733). However, by 1993, the pension of a worker who retired in 1978 would have lost two-thirds of its purchasing power. The negative impact caused by the lack of indexing was only partially offset by subsidy payments to pensioners for food, heat, and housing that were periodically adjusted by the government.

Aspects of enterprise reform have led to a dramatic decline in the standard wage relative to the total remuneration of workers, affecting pensions, which were based on the standard wage received prior to retirement. In 1978, the standard wage in state units represented 86 percent of total compensation. By 1985, the share had declined to 65 percent, and in 1993, it was only 47 percent. Bonus payments have become a major element of total remuneration, rising from 2 percent in 1978 to 23 percent in 1993. For some employees, bonuses exceed wages. Subsidies and allowances also have risen, accounting for one-quarter of total salary in 1993. Thus, pensions--which were linked to the standard wage--stagnated, and the effective income replacement ratio declined.

### ***Reduction in Coverage***

Employment in nonstate sectors, where old age security benefits were smaller or nonexistent,

began to grow rapidly in the 1980s. In 1978, 72 percent of new urban job entrants were assigned to the state sector, but by 1990, the proportion had fallen to 60 percent (Guan, 1994). The state share of urban employment declined from 78 percent in 1978 to 66 percent in 1995. The urban collective share reached a peak of 26 percent in the mid-1980s and declined to 19 percent in 1995. The shares of urban employment in foreign-funded, private, and individual enterprises, while still small (2.8, 2.6, and 8.4 percent, respectively, in 1995), represent sizable numbers of employees -- 5.2, 4.8, and 15.6 million, respectively (China State Statistical Bureau, 1996, p. 21).

### ***Components of Pension System Reforms***

The Third Plenary Session of the 14th Communist Party Central Committee in 1994 specified an overall framework for the establishment of an old age security system. It called for a multi-pillared system combining a social basic pillar with supplemental enterprise-sponsored pensions and individual savings for old age. At present, emphasis is to be placed on designing the social basic pillar, which is to provide a minimum standard of living for retirees and to be financed by the enterprise, employee, and government through a combination of pooled funds and individual accounts. The other two pillars have just begun and are expected to develop slowly. The new system is to move away from a pay-as-you-go status and become partially funded in preparation for dealing with China's aging population. While the reformed urban pension system is still evolving and a complete set of national laws and regulations has yet to be promulgated, the general characteristics of the social basic pillar are already evident.

### ***Formation of Pension Pools***

A regionally-based pension pool system formed along administrative lines (county, city, prefecture, or province) is replacing the work unit as the focal point of the old age security system. Disjointed efforts to move the financing of pensions to a level above the work unit first took place in a few locations in the mid 1980s. For example, the cities of Shenyang and Beijing began to experiment with the unified collection or pooling of pension funds across state-owned enterprises in their cities in 1986 (*Jinrong shibao*, 1994). In principle, all work units falling under the jurisdiction of an administrative pool are to contribute a uniform percentage of their total wage bill to the pool. Pensions to all retired workers within that pool are then to be paid from the pooled pension fund. The objective of unified collection is for an enterprises's pension burden to be based on its current work force and not its retirees and, thus, for the burden to be shared across enterprises.

Across the country, nearly all pools first were formed at the county or city level, and only in limited instances did the initial scope of the pool span the prefecture or province level. In several areas, pools later expanded from the county or city level to the prefecture or province level. The three municipalities having province level status -- Beijing, Tianjin, and Shanghai -- have established pools that cover the entire administrative area. Several provinces, including Guangdong and Shaanxi, have established an adjustment fund at the province level with contributions coming from the subprovincial pools, and the fund is used to assist pools in the province experiencing deficits. By the end of 1994, all cities and counties had either implemented pooling at the local level or were participating in higher-level pools for state-owned enterprise pensions (Lin, 1995).

## ***Multiple Components***

The system of benefits also is changing, as a combination of plans replaces the former single-defined benefit plan. The multiple plans seek a balance between incentives for participation and social equity. The specifics of each plan, in particular the level of benefits, and the combination of plans available to workers vary across regions.

Nearly all pools include as part of the social basic pillar a defined benefit plan with pension benefits linked not to the worker's actual earnings, but rather to the local average social wage. This characteristic of the benefit formula is equalizing, providing for a transfer from higher salaried workers to lower paid workers. Retirees receive a percentage of the local average wage prevailing in the year prior to their retirement. Often the percentage received increases as the years of qualified service increases, an incentive aspect of this pension plan. For example, Shandong regulations state that retirees whose units have paid insurance premiums on their behalf for 15 years or more will be paid a pension of 25 percent of the province average wage, those contributing for 10-14 years will be paid 20 percent, and those who have paid the premium for 5-9 years will be paid 15 percent (*Jinan dazhong ribao*, 1994).

A second component to the social basic pillar that is common to all pools is a defined contribution plan, with contributions, generally, coming from the employee but in some cases also from the employer. These contributions are maintained in special individual accounts. At retirement, monthly payments are disbursed from the principal and interest built up in this account with payments based on the accumulation and average life expectancy at retirement for men and women in the province.

A second defined benefit plan, which is similar in structure to occupational pensions in developed countries, is offered in some pools as an additional component of the social basic pillar. This

pension plan usually takes into consideration the individual worker's earnings and the number of years of qualified service in determining benefits. For example, Yuci city, Shanxi pays retirees with at least 10 years of creditable service 1.4 percent of the worker's average wage for each year of service. Workers who have 15 years or more of service receive 1.5 percent of their average wage for each year. Typically the average wage received by the worker over the years of qualified service serves as the measure of worker's earnings.

Most pools consist of a combination of a defined benefit plan and the defined contribution individual account. Some cities, including Shanghai, Ningbo, and Shenzhen, are experimenting with a pension system based solely on individual accounts, hoping to enhance confidence in the new pension system and to encourage both employers and employees to make their contributions (Ye, 1995). The State Council is not encouraging the second defined benefit plan, believing it is too much like an occupational pension plan and should not be part of the social pillar.

Support for retirees is not limited to pension payments; in fact, pensions represented only 71 percent of total assistance to state retirees in 1994 (China State Statistical Bureau, 1995, p. 688). Free or subsidized medical care continues after retirement as does a whole range of subsidy payments for expenditures such as transportation, heating, and haircuts. However, administrative pools are increasingly basing the defined benefit pensions on total wages (including bonuses, allowances, and subsidies) and indexing benefits for inflation, thereby eliminating the need for most of these separate subsidies to new retirees. Subsidies for medical expenses and funerals are usually the only additional benefits offered in these situations.

## ***Diversified Financing Sources***

Pension financing is being diversified, with the employer no longer the sole contributor to the pension fund. Employees now also make

contributions, and the government is to contribute as needed in its role as pension guarantor. Employers are required to contribute a percentage of total payroll and employees a percentage of their wage income. The contribution rates for employers and employees vary across administrative pools, though in 1994 enterprises contributed an average of about 20 percent of total payroll and employees 3 percent of their wages. Most pools are increasing the employee contribution rate by 1 percent every 2 years. As the employee contribution rate rises, the employer's rate is to fall until each is contributing roughly 50 percent of total premium costs. Presently the employee contribution is usually credited solely to the individual account, while the employer contribution may be allocated in part to the social pool used to fund the defined benefit pension components and in part to the employee's individual account.

Many pools have set limits on the salary or wage subject to the pension contribution rate for both employees and employers. For example, a pool may specify that the portion of a wage which exceeds 300 percent of the local average wage is exempt from the pension payroll levy for employers and from the employee pension contribution levy (Lin, 1995). On the other hand, regardless of how low the actual salary level is, employers and employees may be required to pay the pension levy on a minimum wage level, usually defined as 50-60 percent of the local average wage. This regulation is intended to add a measure of equality into the social basic pillar and to discourage employers from paying low wages to reduce their pension premium.

### ***Progress and Impact of Pension Reform***

The reformed social basic pillar has already been adopted to varying degrees across China's urban areas. Thus, while experiments focused on refining the new system are still ongoing, it is not too early to begin to assess how well it has dealt with the weaknesses of the former system. The suitability of the new system for a socialist market

economy and its implications for labor markets are also of interest.

### ***Expansion of Coverage***

Under reforms, first priority is being given to unifying and standardizing the pension system for state-owned enterprises, but pools gradually are expanding coverage to other types of urban enterprises. One of the first to be added has been urban collective enterprises, in particular those which have been offering pension benefits patterned after the state system. At the end of 1994, 176,125 urban collective enterprises were participating with 13.2 million workers and nearly 4 million retirees covered. Participation in the reformed old age security program also is slowly being opened up to workers outside the state and collective sectors. At the end of 1994, 1.6 million workers outside the state and collective sectors were participating in pension pools, of whom nearly 1 million were in foreign-invested enterprises (China State Statistical Bureau and Ministry of Labor, 1995, p. 493). Participating workers in foreign-invested enterprises represented half of all staff and workers in enterprises of this ownership type (China State Statistical Bureau and Ministry of Labor, 1995, p. 443). In some areas, such as the coastal provinces of Guangdong, Jiangsu, and Zhejiang, foreign-invested enterprises participate in a separate province-wide pool. Hainan province is one of the first administrative areas to offer participation in old age insurance to all urban workers regardless of the type of enterprise (state, collective, or private) or worker's status (temporary, contract, or permanent worker). Vice-minister of Labor Wang Jianlun announced that the new old age security system aims to cover all urban workers, including the self-employed, by the end of this decade, with coastal and major inland cities expected to reach the goal before then (Xinhua, 1995).

For private enterprises and the self-employed, contributions are based on the local average wage for the previous year. This avoids the high administrative costs associated with determining and

verifying wage rates for these individuals. Self-employed individuals contribute both the employer and employee share to the pension fund, with the majority of the contribution going into the individual account. For example, in Hainan, the self-employed contribute 20 percent of the province average wage for the previous year, of which 4 percent goes into the pooled social insurance fund to finance the social pension, and the remaining 16 percent goes into their individual pension accounts. Qualifying conditions for employees of private enterprises and the self-employed in Shandong province are 1) aged 60 or over for males and aged 50 and over for females; and 2) 5 years or more of contributions to the basic pension program (*Jinan dazhong ribao*, 1994). In return, retirees are eligible to receive the pension, subsidies for medical expenses and funerals, and supplemental funds for dependents.

The expansion of the social pension program to cover urban workers across all ownership types may lead to a decline in labor force participation rates among the older population. Many workers outside the state and collective sectors have had to rely on personal savings and family to support themselves in old age. The lack of entitlement to a pension often forces them to continue working beyond the ages at which state employees may retire. In the near term, this potential impact on the labor force is likely to be most noticeable in coastal provinces, in particular Zhejiang, Fujian, and Guangdong. In these areas, urban workers employed outside the state sector account for nearly 50 percent of all urban workers (China State Statistical Bureau, 1995, p. 84). As the urban share of China's total population increases through rural-to-urban migration and reclassification of rural areas as urban, the decline in labor force participation rates among the older population will become more widespread. A decline in labor force participation rates among older populations may be seen as desirable given the large number of new job entrants, redundant labor force in state-owned enterprises, and surplus rural labor.

While the reformed pension insurance system is embracing more workers, it is still largely limited to the urban labor force, which presently comprises just 27 percent of China's total labor force. The Ministry of Civil Affairs started a voluntary, defined contribution old age pension program in rural areas in the early 1990s. Contributions to this pension plan come from individuals, and only in the economically-better-off areas do rural enterprises and/or local governments offer to match a portion of the individual's contribution. Furthermore, the Ministry of Civil Affairs plan appeals to a limited number of rural households. It is not attractive to households in wealthy rural areas where farmers would rather invest their money in other endeavors that are perceived as more profitable and secure. For households in extremely poor areas participation is not economically feasible.

By focusing only on the urban labor force, the reformed old age security system is unlikely to address the issue of growing rural-urban inequality. Over the period 1985 to 1995, real per capita income grew at an average annual rate of 5.7 percent in urban areas and at only 3.1 percent in rural areas (China State Statistical Bureau, 1996, pp. 46, 53). An International Labor Organization (ILO) and Ministry of Labor survey of 300 industrial enterprises in Beijing, Shanghai, Guangzhou, Tianjin, and Shenyang in 1995 found that while rural residents temporarily engaged in urban state and collective firms for a year or longer are supposed to be covered by the labor contract system and entitled to pension benefits, they are frequently denied these benefits. The survey found that enterprises often get around this provision by signing rural residents to multiple short-term contracts or simply by replacing them (Lim and Sziraczki, 1995, p. 15). It is not clear that the new Labor Law implemented in 1995, which calls for eliminating separate employment systems and placing all employees under the labor contract system, will resolve the discrimination (Xin, 1995).

The distinction made between the urban and rural labor force for the purposes of defining worker

benefits is becoming increasingly inappropriate. Rural-urban labor mobility has increased tremendously with the easing of restrictions on labor movements in the early 1980s. Tens of millions of rural laborers migrate annually to urban areas to work; some working only part of the year in the city while others have lived and worked in the city for several years. The latter seldom are allowed to establish permanent residency in the city and hence are excluded from most urban pension pools.

### ***Portability***

An important argument for moving pools to the highest level possible is to facilitate the development of labor markets. The persistence of numerous pension pools, whether geographically or industry based, inhibits labor mobility. While it was not unusual in the past for a worker to have the same employer throughout his/her working life, today China has an increasingly mobile labor force. In the past decade, a number of workers have left the state or collective sector to join foreign-invested enterprises or to go into business for themselves. Workers also are switching industries within the state sector, many moving into the growing service sector. In 1993, the urban labor mobility rate for state units, collective enterprises, private enterprises, and the self-employed averaged 3.2, 3.8, 6.3, and 20 percent, respectively (Lu, 1994).

Even greater labor mobility can be expected as the restructuring of state-owned enterprises progresses. It is inevitable that a number of state-owned enterprises will need to shed redundant labor if they are to be competitive. A wide range of estimates of labor redundancy exists, including a State Statistical Bureau estimate of 20 percent of state-owned enterprise employees based on a December 1994 survey and a State Economic and Trade Commission estimate of one-third of the currently employed workforce (Lim and Sziraczki, 1995, pp. 4-5). Some enterprises will face bankruptcy and their entire work forces will need to find other jobs. It is increasingly likely that in the future new entrants to the labor force as well as

redundant laborers will be absorbed by the nonstate sector. Experts estimate that during the Ninth 5-Year Plan period (1996-2000), cities and towns will need to deal with a total of 15 million redundant workers from urban enterprises in addition to those surplus rural laborers entering the cities (Xinhua, 1995). Over time the issue of the transfer of pensions benefits and the portability of pensions will become increasingly important.

### ***Fund Administration and Management***

Thus far, most pension pools play a limited role, redistributing only surplus pension funds from a subset of enterprises to deficit enterprises. Enterprises generally continue to disburse pension benefits to retirees directly and turn over to the county- or city-based pool only the surplus pension premium remaining after meeting the enterprise's current pension obligations. Enterprises with a current pension outlay exceeding collected premiums receive an allocation from the pool to help cover expenditures. As of 1995, only about one-quarter of workers in state-owned enterprises were covered by pools which distributed pensions from banks instead of directly from the enterprise (Cao, 1995).

One of the key objectives of the new pension system is to move away from a pay-as-you-go system to partial funding; however, in the near term, this may not be desirable for several reasons. First, regulations on fund management are incomplete and an effective enforcement mechanism is absent, making it very difficult to ensure safe and sound management of the pension reserve funds under the control of numerous local governments (counties, cities, prefectures, and provinces) and different ministries and industry groups. Second, financial markets in China are underdeveloped, providing few safe and profitable investments. The lack of regulations and volatility of the domestic stock market raises serious questions of the advisability of investing social insurance funds in the equity market at this time. The State Council holds this view and has issued regulations stating that 80 percent of accumulated pension funds are to be

invested in central government bonds and the remaining 20 percent may be kept as reserves in bank savings accounts (*Jingji ribao*, 1994). During periods of high inflation, however, the return on government bonds has been negative. In response to this problem, the government is beginning to issue special social insurance fund bonds which have a longer payback period and offer higher rates of interest than other financial instruments.

### ***Sustainability***

Firms and individuals are reluctant to join pools because of concerns over the adequacy of funding for current and future obligations. As mentioned above, the reformed system is to be partially funded, but there does not yet appear to be a consistent policy on the degree of partial funding to be achieved. An annual surplus target of approximately 2 percent of total wages is mentioned by central government officials; however, Hainan province announced that it plans to accumulate no more than 10 percent of employer contributions in the pension fund (Krieg, 1994). An accumulation will be needed to prepare for the future when retirees will increase because of both the maturation of the expanded coverage under the reformed system and the aging of the population. Because funds are scattered across numerous pools and under the supervision of different government departments, aggregate fund reserves are difficult to measure. By the end of 1995, reserves had reached 50 billion yuan and because of rising pension expenditures, were less than 1 year's annual expenditure (West, 1996).

A number of enterprises in financial difficulties have joined the new pension pools but are being granted a transition period before they are subject to the new system's regulations. In 1994, nearly one out of four enterprises participating in pools needed assistance in meeting contribution obligations. The problem is most serious for urban collective enterprises, with 28 percent of those participating in pools unable to meet their obligations in 1994. The unmet obligation per

employee for urban collectives is higher than for state-owned enterprises (683 yuan as compared to 449 yuan) even though state worker salaries are higher. Only 2 percent of foreign-funded enterprises participating in pools had difficulty meeting obligations in 1994.

To deal with these difficulties, some areas are using a portion of the pooled pension insurance fund to assist enterprises unable to meet contributions. For example, in Guangdong, 1 percent of pension contributions is designated for use in assisting enterprises having financial difficulties within the local pool and 1 percent is transferred up to the province for redistribution across pools in the province, also to subsidize enterprises unable to fulfill contribution obligations (*Nanfang ribao*, 1993). Shenyang, the provincial capital of Liaoning, established a life insurance company in 1989 in part to deal with this problem. This insurance company is providing 12 million yuan in loans to 215 enterprises which could not meet their pension fund obligations to the citywide pool (*Gongren ribao*, 1994). According to regulations, all enterprises eventually must pay their arrears and the penalties for nonpayment. However, it is questionable whether most enterprises will ever be able to clear these arrears or whether the government will supply the funds.

Both the former system and the reformed system offer generous benefits with high income replacement ratios (about 80 percent) and relatively young retirement ages (West, 1996). The ratio of the population in the working ages of 20-59 to the population aged 60 and over is projected to decline from 6.7 in 1995 to 5.0 in 2010 and to only 2.7 in the year 2025. Without significant changes in the retirement age, not only will the number of retirees explode, but the retirement period also will expand. One possible change is to raise the retirement age for women to 60 and then gradually raise the retirement age for both men and women to 65. By the year 2020, life expectancy at age 65 will be comparable to life expectancy at age 60 presently.

Reducing the income replacement ratio to 60 percent or lower in the near future is under discussion, with proponents arguing that the other two old age security pillars should fill in the gap. Under an income replacement ratio of 60 percent and a tax rate of 20 percent, pension expenditures start to exceed pension revenues in 2011 and pension fund reserves become negative in 2021, with the accumulated shortfall exceeding 1.3 trillion yuan by 2025. If participation in the reformed social basic pillar is expanded to include long-term rural migrant labor and employees of township and village enterprises located near cities, the financing burden of the system is greatly eased because of the relatively young age structure of these workers and because they do not bring unfunded preexisting liabilities to the system. For any given income replacement ratio and contribution rate, the basic pension system remains financially viable for a longer period of time. By expanding coverage, more maneuverability is available in setting the contribution rate or income replacement level.

### **Conclusion**

China has made an excellent start in laying the foundation for a more stable old age security system. The new system includes what the World Bank (1994) refers to as multiple pillars, although the distinction between the public and private pillars remains unclear in China. The financing burden is being shared by employees, employers, and the government rather than being borne exclusively by the individual work unit. The framework for a defined contribution plan and partially-funded social and supplementary pension plans is set to replace a pay-as-you-go system. Also, pensions are being indexed to control the erosion of pension value by inflation.

Pension reform is incomplete and many important issues remain. In the short run, it is critical that regulations and supervision catch up with the new system. In common with other countries, China needs to safeguard pension funds

and yet achieve sufficient growth to meet the demands of future retirees. Contributors and beneficiaries alike must be assured that accurate records are being kept and that funds are properly managed. In the longer term, expansion of coverage and benefit adjustments must be considered. As China's economy continues to develop, "modernization," with all its ramifications and increased geographical mobility, is weakening traditional forms of support.

If pension reform is to be successful, state-owned enterprise reform must proceed. There are many aspects to state-owned enterprise reform, including the establishment of unemployment insurance, housing reform, and a determination of how to value and sell off state assets while preserving a portion of assets from bankrupt enterprises to cover pension obligations. Delay in completing state-owned enterprise reform runs the risk of the reformed pension system unraveling if the current need to bail out state-owned enterprises continues indefinitely. At the same time, a reformed pension system has an important role to play in increasing labor efficiency through labor mobility and thus enterprise efficiency. A financially sound and broad-based old age security system is critical for the development of labor markets.

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## **Selected Influences On Chinese Trade Patterns**

Charles J. Fuller

### ***Summary***

Several factors affect whether the enterprises included in this study are likely to take the steps necessary to export their products. These factors include senior managers' willingness to assume risk, affinity for foreign countries in general, as well as the managers' age and education levels. Once having made the decision to export, various additional factors affect whether these efforts will be successful. Among these are whether the countries that are being targeted for export have high quality standards, the payroll burden of the exporting enterprise, as well as the extent to which the enterprise has employees with the specific skills (such as foreign language proficiency, management skills, etc.) needed to export successfully.

### ***Introduction***

International trade is an inherently geographical phenomenon, and the study of international trade as a discipline often is visited by economic geographers. When geographers write about international trade, it is either to suggest new perspectives (McConnell, 1986; Berry, 1989), evaluate old ones (Johnston, 1989), or to report on empirical research (Hanink, 1987, 1989; Gaile and Grant, 1989; Erickson and Hayward, 1991).

This paper is abstracted from a dissertation that utilized a qualitative approach to identify determinants of the spatial patterns of China's exports normally not considered by traditional research methods in the fields of international trade geography and international economics (Fuller, 1997). The study evaluated the evolution of export patterns of state-owned enterprises from the perspectives of export department managers, and the political-economic milieu (the interaction of politics and economics) in which they function. The intent

was to generate a new set of hypotheses that complement and augment better-known macro-level determinants and theories.

### ***Research Problem***

Export patterns are complex, multidimensional phenomena reflecting social, political, and economic factors. China's export patterns are affected by a number of determinants. These are economic (supply and demand, domestic and international); the political economy of China (including remnants of the socialist planned economy); export accounting issues related to entrepot trade; the re-export of commodities through intermediate countries; and individual enterprise characteristics. The study of China's export patterns also must take into account the level of analysis; different levels of aggregation incline us to different assumptions. For instance, China's volume of exports to the eighteen world regions used by the United Nations have shown remarkable pattern stability over time. Alternatively, comparing China's top 15 national export markets since 1985 shows that only eight countries consistently occupy positions of prominence. On the other hand, a provincial (Zhejiang) perspective reveals both stability and fluctuation; while the four-to-five top export markets and their export shares are relatively stable, the second tier of export markets show considerable year-to-year variation. Still further, the export pattern of a single enterprise in Beijing shows just the opposite trend from the results derived from the provincial approach—decreasing overall volume and massive consolidation of exports to a single country. The purpose of this comparison is not to analyze the spatial patterns, but to show how higher levels of aggregation mask the volatility of export patterns at increasingly lower levels. It also suggests that export patterns at disaggregated levels are influenced by factors not generally evident in macro-level analyses.

Several factors suggested a qualitative study of enterprise export patterns. First, the assertion by Nobel laureate Wassily Leontief that the

econometric approach had not contributed to our understanding of real economic systems. The second factor was China's impressive experiment with economic restructuring. The third factor was R.J. Johnston's call for a holistic theory of political economy coupled with Brian Berry's for cultural-specific models. And finally, the lack of attention paid to China's state-owned sector vis-à-vis the export economy. With these and other intellectual affinities in mind, a study was initiated to reveal underlying factors within China's political economy that directly or indirectly affect the export decision making of state-owned enterprises, and therefore the export patterns of their enterprises. Export patterns result from decisions made by enterprise managers as they cognitively assess and react to a wide range of stimuli absent prior to China's two-decade period of economic reform. The Bo Hai Gulf provinces—Liaoning, Hebei, Shandong, Beijing, and Tianjin—were chosen as the region for study in part because the ratio of state-run to market-oriented enterprises is high compared to other regions, particularly the central and southern coastal provinces. It is understood, however, that the same approach implemented in other regions of China might result in different findings.

### **Methodology**

#### **Respondent Selection**

The primary enterprise selection criteria were: 1) that the enterprise had received direct foreign trade management rights no later than 1989; 2) that the enterprise be a manufacturing entity; and 3) that the enterprise have some form of state ownership. Selection was to be limited to light industrial enterprises, but this distinction is not always clear. Initially textile manufacturers were to be excluded from the study, but two of these provided useful data. Interviews were attempted within all of the Bo Hai Rim provinces, and succeeded save for Hebei.

In qualitative research, especially involving interviews and case studies, non-probability methods

of sampling often are used, depending, for example, on who is available or to whom the researcher is introduced. The first enterprise contact, coded ENT-1, was made through an introduction by the Beijing International Trade Research Institute in October 1993. Another introduction through the World Trade Center Beijing led to interviews with the second enterprise, ENT-2.

In April 1994, the China Foreign Economic Relations and Trade Publishing House published *A Directory of Chinese Manufacturers with Import & Export Rights*. This publication listed all the manufacturing enterprises with direct export management rights in China as of December 1993. Through the use of this publication, an additional five enterprises, those coded ENT-3, ENT-7, ENT-9, ENT-10, and ENT-11, were contacted and interviews were arranged. Wishing to make greater use of *The Directory* to determine if there are statistically significant characteristics common to all manufacturers with direct foreign trade rights, a one-page survey was sent to all 300 enterprises in the study region provinces of Beijing, Tianjin, Liaoning, Hebei, and Shandong, plus the other two Northeastern provinces of Jilin and Heilongjiang, and for comparison, Shanghai and Sichuan. From this mailing, forty surveys were returned. Several contained interesting information. Four of them agreed to be interviewed, bringing to eleven the final number of state-owned enterprises participating in the study.

The products of the respondent enterprises included: electric motors, agricultural pumps and pump motors, spot welded wire mesh, silk flowers and paper items, watches, Western tableware, hand- and machine-made carpets, TVs and VCRs, electron guns, TV picture tubes, cassette recorder mechanisms, abrasive materials and grinding wheels, medium-to-high pressure valves, and cotton yarn and cloth (Table 1).

## **Data Analysis**

Altogether approximately 64 hours of interviews were conducted with decision makers involved in the export business of the eleven state-owned enterprises. Each comment was carefully scrutinized and coded based on its most obvious characteristic. The comments then were grouped into 36 constructs. Each is composed of related respondent observations that to some degree, directly or indirectly, impinge on the evolution of export patterns. Weighing the effect of these variables proved challenging. If the constructs are ranked by frequency of response, then clearly the impact of 'Management' factors on export patterns plays a larger role than such economic mechanisms as 'Supply and Demand' or 'Incentive Systems' designed to stimulate exports. On the other hand, common sense and experience suggest that other variables addressed less frequently or with greater reticence may, in fact, have a weightier impact on export-related transactions. 'Research and Development,' for example, obviously an important variable in product design and export success, was so infrequently addressed by respondents that the concept was eventually subsumed under other constructs. Ultimately, the effort to find a statistically sound or positivist method for weighing and indexing constructs was abandoned.

## **Results Findings**

After the iterative process of coding, construct-building, and categorization, statements within each construct were compared in order to identify patterns of response, that is, repeated elements from which a valid finding could be derived. Not all data within a construct were amenable to pattern-building; similarly coded respondent statements did not always have enough overlap to suggest a broadly valid observation. Several constructs did yield enough comparable information to qualify as a finding, and on which hypotheses could be generated. At first glance, some of the findings seem to be common-sense and

are applicable to enterprises universally (Table 2). Further scrutiny reveals, however, underlying structures that are context-specific for China.

## **Contract Responsibility Systems**

The data coded to the construct 'Strategic Behavior' generally were responses to the following interview question:

Which principle characterizes your enterprise's decision making: 1) long-term development, 2) short-term profit, 3) other?

The intent of this question was to discover factors that might incline management towards a long-term, strategic export development policy involving, perhaps, intentional losses leading eventually to greater market share, or towards behavior that neglects long-term foreign market development in favor of immediate (if temporary) profits. Of the nine enterprises responding to this question, six claimed that both principles are applied. Four offered contrasting views, one of which passionately responded:

Export decision making is based on the principle of short-term profit. Definitely, how could it be otherwise! The contract responsibility system (CRS) and contract management system (CMS) create short-term behavior for short-term benefit. . . Long-term development might be possible in non-state-owned enterprises.

Another similarly recalled:

Business decision making is now based on the principle of short-term profit. In 1989 the thinking was long-term planning and development. . . . But there was no contract responsibility system. Now with the CRS (the factory/managers) cannot lose money, so we must be short-term profit oriented.

These statements not only disclaim the application of long-term development strategies, they also unequivocally link the ascendance of non-strategic, short-term managerial behavior to the implementation of the contract responsibility system.

The following comment further explicates the effect of contract responsibility systems on the nature of strategic decision making:

Decision making is, according to principle, focused on long-term customer development, but economic performance is critical, contractual obligations must be met, so the short-term profit motivation cannot be discounted. If long-term planning results in loss, then there is no choice but to go for short-term profit.

'Economic performance' as used in this statement, refers to the basic criteria for granting and maintaining direct export management rights, and to the guidance planning targets for exports allocated by the local Foreign Economic Relations and Trade Commissions. Strategic planning implies a calculated risk that may result in temporary losses, perhaps for several years, to be followed by strong and stable growth. State enterprise managers are not, however, rewarded for far-sightedness, but for meeting short-term, annual goals.

The 'contractual obligations' in the above comment refer to the output covenant between laborers and their workshops (now called branch factories), between appointed workshop managers and the head office, and between the general manager and the local administrative entity with jurisdiction over the enterprise. These contractual relationships, designed to stimulate state enterprises, on the contrary seem to perpetuate phenomena emblematic of the pre-reform command economy, in particular a focus on quantitative targets at the expense of qualitative improvements. This is just one of the consequences of the contract

responsibility that affects state enterprise competitiveness in both domestic and overseas markets. Competitiveness is not a random, spontaneous phenomenon, rather the result of coordinated, sequential actions over time. But, as one respondent noted:

Another obstacle to greater competitiveness is the contract responsibility system. There is no guarantee of continuity, managers change frequently.

If managers in some state enterprises lack long-term security, if they are pressured to 'volunteer' for supervisory positions, and if contractually they can be financially penalized for not meeting targets, production compromises are likely to occur. To compete with entrepreneurial enterprises, state enterprises need to make tangible and intangible investments in such areas as more efficient production technologies and market research. This requires not only capital but the test of time as well. Consequences of unpredictable managerial turnover include reluctance to replace old equipment, and unwillingness to support a long-term development program that would eventually identify trends in foreign markets, and exploit new materials, styles, and products.

By contrast, China's township-village enterprises generally have not implemented contract responsibility programs. In light of the comments cited above, and given the vitality of township-village enterprises in both domestic industrial production and export growth, it appears that contract responsibility systems may have a deleterious effect on state-owned enterprises, particularly regarding the ability to implement long-term export development programs. There will be other factors as well that disincline state-run enterprises to plan strategically, additional constraints that are absent in the more market-oriented enterprises. Nonetheless, based on construct analysis, we can hypothesize:

Contract responsibility systems in state-owned enterprises contain a short-term bias that impedes the conception and implementation of long-term export development strategies.

### ***Managerial Perceptions and Orientation***

One of the more interesting concepts to arise from studies on enterprise internationalization is that of 'psychic distance.' This concept, first articulated in 1977, is defined as:

. . . the sum of factors preventing the flow of information from and to the market. Examples are differences in language, education, business practices, culture, and industrial development (Johanson and Vahlne, 1977, p. 24).

To investigate the relationship between export development and psychic or psychological distance for the enterprises in this study, a number of questions were posed to determine respondent perceptions about foreign institutions. The term 'institution' is used in its broadest sense to include private and government agencies, ethics and behavior, laws and conventions, and so on. Respondents were asked to identify countries with most and least strict quality demands, best and worst business style and ethics, whether they personally liked or disliked certain countries or cultures, and best and worst impressions from business trips abroad.

A few patterns begin to emerge from the data. As expected, respondents find the quality demands of Japan the most stringent, and to a slightly less degree Western European countries and the United States. None of the respondents questioned the legitimacy of Japan's quality demands, whether Japanese consumers truly have such discriminating tastes, or whether quality criteria are artifices to protect local industries. Regions cited as having the least strict quality standards include the Middle East, Bangladesh, Southeast Asia, and Africa.

Americans and Germans regularly were cited as nationalities with the best business style, business ethics, and overall impression. The Chinese seem to appreciate certain qualities emblematic of these cultures. Several countries from diverse world regions were mentioned on the opposite end of this popularity scale. The diversity of best and worst perceptions indicates that collectively, enterprise representatives have traveled to many different countries, and that their experiences have been both positive and negative. It is not surprising that one respondent who had a bad experience on an exploratory trip to Hungary ('discrimination against Chinese, bad social environment, language barrier because few people speak English') no longer attempts to export to that market. The importance of perception is not unique to China. One study found that exporting success by small American firms correlated in part to whether or not an official of the firm had lived overseas, and if that experience had been attractive (Bilkey and Tesar, 1977, p. 94).

Sometimes economic imperatives compel Chinese enterprises to export to markets despite either psychological distance, disagreeable experiences, or an impenetrable foreign trade system. The watch manufacturer in the study exports to India through a Hong Kong agent, even though a portion of each consignment may be entering through illegal channels because intensive domestic and foreign competition has left few markets open. The Middle Eastern Islamic states and the nations of Africa probably are the psychologically most distant countries from China. Respondents complained of unreliable financial institutions in Africa and unknown cultural taboos in Africa and the Islamic states.

Ultimately, overcoming psychological distance to enter a foreign market comes down to the knowledge, volition, and action of enterprise decision makers. One study showed that managers who are older, less educated, averse to risk, unwilling to change, and have a negative attitude towards exporting, are less likely to actively pursue foreign markets (Dichtl, et. al., 1990, p. 27). The

respondents would be hard-pressed to select from this set of qualities the most characteristic vis-à-vis their own managers, but it may be speculated that risk aversion is the quality that, internally, most constrains export development.

The concept of psychological distance as an export determinant links to the management construct. Upper-level managers with an outward, cosmopolitan orientation and Western-style education will be more willing to invest in the tools of foreign marketing, the research and development necessary to produce for the market, and will support rational, calculated risks.

There are several reasons why this proposition alone may not lead to success in the export market. The state sector faces so many institutional challenges that the outward orientation of a key decision maker may be insufficient to promote export growth and market diversification. Orientation alone does not imply ability. And whatever one's personal orientation, prevailing attitudes may suppress foreign favoritism; the comment *xin you yu ji*, or one's heart has a lingering fear, occasionally was mentioned in relation to the possibility of shifting political winds. Even a Western-educated manager would be hard-pressed to overcome the various financial crises of the state sector. It would be a meaningful exercise to identify successful and unsuccessful small-to-medium sized state sector exporters, and query their managers about attitudes towards foreign nations and cultures, and their experiences living or traveling abroad.

### ***Further Generalizations***

While the findings themselves are substantial within the context of China, further generalization led to a model that refines our understanding of China's political economy of export development. Three higher level abstractions were identified from the findings. First, the variables embedded in the findings can be classified topically as specifically financial- or management-related with a third more general category of institutional variables. Second,

they can be divided into those that affect enterprises selectively, and those that are pervasive, the latter constituting the milieu in which all enterprises must function. The third dimension is whether the finding represents a scenario that enterprise decision makers can control, or whether it is beyond the purview of management.

There are several observations that can be made. The 'enterprise selective' set of variables are factors to which individual enterprises must adapt (defined 'non-controllable') or alter from within ('controllable'). For example, one finding is that insolvent or weak enterprises may, despite the inherently greater cost associated with export trade, attempt to engage in export trade to strengthen their financial condition. This is controllable because the decision to attempt exporting can be made, even if other factors make implementation of the decision difficult. On the other hand, we also find that older enterprises, those established before 1975, cannot easily become competitive exporters until their payroll burdens are reduced. This is an objective situation that requires the impartiality of time as well as the increased utilization of temporary and contract laborers. Most of the enterprise-selective management variables fall within the purview of enterprises. Management quality, cognizance of opportunity, foreign-language competent staff, management orientation, and operational philosophy can all be affected from within the enterprise itself or through its head administrative agency.

The pervasive set of variables are those factors which all enterprises within a common geographic region must contend with or benefit from. Those that are classified as controllable represent factors that enterprises can influence. Non-controllable factors are those represented by forces beyond the purview of enterprises. For example, debt and dependence on government subsidies are pervasive problems for state sector enterprises, but laws have been passed theoretically giving such enterprises authority to take debt reduction measures, such as firing unproductive

workers. But in a market economy, there is little that enterprises can do to affect the suprasocial laws of supply and demand.

### **Conclusion**

The original study set out to identify variables in China's political economy that directly affect the evolution of export patterns at the enterprise level. This was to be accomplished by applying qualitative analysis to data acquired through structured interviews. This was achieved as shown by the sixteen context-specific findings, all of which contain variables excluded from normative models of export pattern evolution. The context-specificity of these findings cannot be over-stated. Even when sounding like basic, universal, and even common-sense economic principles, it should be understood that the processes leading to a familiar conclusion will be alien to a reader unfamiliar with China's political economy and economic geography. The processes themselves should, therefore, receive as much attention as the findings.

The goal of the original research design, to address the link between decision-making behavior and export patterns, was not directly achieved in the study. Had the enterprises been able to supply complete data on the volume and direction of their exports over a 5-year period, the changes in those patterns could have been addressed more directly. This study has, on the other hand, identified many variables that influence export pattern evolution, even if the link was not mathematically substantiated. A continuation of the study would necessarily focus on the nature of those links.

It is necessary to further emphasize the issue of scale. China's national pattern of trade has remained fairly stable over the past 15 years. Provincial patterns tend to be somewhat more dynamic. At the enterprise level, however, export patterns can be quite erratic. For example, in the aftermath of the Gulf War in 1990-1991, the exports from a manufacturer of high-pressure valves increased dramatically in both volume and direction

(from exports to the United States to exports to the Middle East), only to revert to a pre-war type of pattern one year later. Some commodities lend themselves to a stable, repeat customer base, and so the manufacturers' patterns change little. Other products frequently are sold to buyers on a one-time or occasional basis only, and thus year-to-year changes can be dramatic. The volatility of enterprise level export patterns, however, are masked when aggregated to the national level. To generalize about a lower level of aggregation based on findings at a higher level is to expose oneself to the ecological fallacy (when one makes an erroneous generalization about one level of aggregation based on observations at a higher level of aggregation).

The links between micro-, meso-, and macro-patterns of export warrant further consideration and would necessarily involve a multi-disciplinary approach requiring both quantitative and qualitative methods. China, with its rapidly evolving hybrid and export-oriented economy, remains the most engrossing location to test old theories and hypotheses, and to generate new ones.

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**Table 1. Enterprises in Study and their Main Products**

Enterprise Code	Main Products	U.S. Standard Industrial Classification
ENT-01	silk flowers, paper products	23, 26
ENT-02	wrist watches	3873
ENT-03	dinnerware, silverware	3914
ENT-04	carpets	2273
ENT-05 (TVE)	electric motors	3621
ENT-06 (TVE)	metal (wire) mesh	3496
ENT-07	grinding wheels, abrasive materials	3291
ENT-08	electric motors	3621
ENT-09	televisions, VCRs	3651
ENT-10	black and white TV tubes	3651
ENT-11	tape recorder parts	3651
ENT-12	high pressure valves	3491
ENT-13	textiles, cotton cloth	2211, 23

**Table 2. Findings**

1	The 'quality' of upper echelon decision makers (general and vice-general managers) acts upon the latent export potential of Chinese state-owned enterprises.
2	Contract responsibility systems in state-owned enterprises contain a short-term bias that retards the conception and implementation of long-term export development strategies.
3	Centrally-planned export targets allocated to state-owned enterprises through local foreign economic relations and trade commissions, and foreign currency needs, retard normal enterprise decision making based on supply and demand.
4	Cognizance of, and the ability to utilize different export channels affects both the volume and direction of exports.
5	State-owned enterprises, particularly those established before 1975, will not become internationally competitive until payroll burdens are significantly reduced through pensioner attrition.
6	In state-run enterprises, debt leads to dependency on state subsidies that leads to greater debt, thus constraining the enterprise's ability to become internationally competitive
7	Insolvent or financially weak state-owned enterprises, faced with competition and loss of domestic market share, may attempt to engage in export trade as a means to improve their financial strength.
8	Enterprises are dependent on the export tax rebate to sustain export development. In the absence of an export tax rebate, enterprise exports would decrease, and some enterprises would have to abandon export trade.
9	Small-to-medium sized state-owned enterprises producing for export do not benefit as much from export reforms as do the nonstate, entrepreneurial enterprises.
10	Reforms have failed to enhance the export competitiveness of small-to-medium state-sector enterprises compared to the non-state sector.
11	Enterprises managed by upper-level decision makers with an outward, cosmopolitan orientation will be more successful exporters.
12	Enterprise's that perceive the need to adjust product quality or change product lines in order to adapt to changes in foreign markets are unable to do so because of a shortage of working capital.
13	An operational philosophy focused on short-term profits discourages product diversification and quality improvements, and impairs the enterprise's ability to adapt to changes in the market.
14	Nationally promulgated foreign trade laws and regulations are weak determinants of export development at the enterprise level.
15	Export development is influenced by the nature and scope of local government incentives.
16	Provincialization of production of exportable commodities results in fragmentation of latent export competitiveness, loss of scale economies, and inefficient resource use, which ultimately diminishes the export potential of individual enterprises.

Source: Original survey, 1994-1995